

File Translation Tables

PAC file translation tables (FTTs) allow you to compile Natural objects with the set of user database/file numbers defined by the views/DDMs with which the objects are compiled, and execute them against another set of user database/file numbers.

Because the objects are compiled just once, the code that is tested is the same code that is executed in production. The FTT facility maintains application integrity and reduces the amount of work required to prepare an application for implementation.

Refer to *Configuring a PAC Environment* for additional information and examples of FTT use.

You may use an FTT with all applications and/or statuses, or you may restrict its use to a specific application and/or status to provide security or effective use.

You may set up one or more base tables and then create or copy subsets for special requirements. For each table, the origin DBnr and Fnr always represent the DBnr and Fnr of the views/DDMs with which the objects were compiled.

This chapter covers the following topics:

- Displaying the FTT Main Menu
 - Adding (Defining) a File Translation Table
 - Selecting a File Translation Table
 - Displaying a File Translation Table
 - Modifying a File Translation Table
 - Copying a File Translation Table
 - Linking an FTT to an Application Status Link
 - Changing an FTT Assignment
 - Purging a File Translation Table
-

Displaying the FTT Main Menu

To access the PAC file translation table (FTT) maintenance and reporting sub-functions, enter Code F (File Translation Tables) on the PAC Main Menu.

Depending on your user profile, the File Translation Table Menu or the File Translation Table Reporting Menu appears. The File Translation Table Menu that combines the maintenance and reporting sub-functions is used throughout this section.

Note:

The Modify Application Status screen can also be used to define file translation tables. In this case, a "dormant" file translation table is created for the application status. This table is activated once it is updated with a set of DBnr and/or Fnr entries.

```

15:28:39          ***** PREDICT APPLICATION CONTROL *****          2000-02-09
User PACUSR      - File Translation Table Menu -

      Code  Sub-Function
      ----  -
      A    Add File Translation Table
      C    Copy File Translation Table
      D    Display File Translation Table
      M    Modify File Translation Table
      P    Purge File Translation Table
      S    Select File Translation Table
      ?    Help
      .    Exit
      ----  -

Code ..... _      Operand .... O
Application ..... 
File Table ..... 
New File Table .. 
Status ..... 

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Menu  Exit                                Canc

```

Note:

All of the sub-function on this menu, except Add and Copy, may be selected for processing directly from the File Table Selection list that is accessed using the Select FTT sub-function.

Operand Field

File Translation Tables can be type AND or OR. A one-character code is used to identify the type of table:

- A indicates the AND operand; the DBnr and Fnr translation are processed together as a pair. An AND operand table may be changed to an OR operand table until the first entry is entered into the table.
- O indicates the OR operand (the default); the DBnr and Fnr translation are processed independently of one another. You need specify only the database number, and not all of the file correlation is the same between origin and destination.

Application Field

The name of the application to which the FTT is defined. Each FTT may belong to only one application or to no specific application; that is, the application name may be left blank. If an application is not specified, PAC considers the FTT to be valid for all applications. PAC uses the ****All**** notation.

You may enter an application name, an alias, range notation, or leave the field blank.

File Table and New File Table Fields

The File Table field is used for the name of the FTT. You may enter an FTT name or range notation.

Each FTT name must begin with an alphabetic character and may be from 1 to 32 characters in length. Embedded blanks are allowed, but are automatically changed to the underscore (_) character. If a duplicate FTT name is entered, an error message is displayed.

An existing FTT may be copied under a new name and optionally to another application and status. The New Table field is used to add a unique name for the new FTT.

Status Field

The status to which the application is linked. The FTT is applied when objects are migrated into this status (destination or "To" status). It may be a P or T status type; or it may be a blank, range notation, or an alias name.

The FTT may be defined as being either shared (the FTT may be used with any status) or not shared (the FTT may only be used with one specific status). If you enter the status name, the FTT will be defined as not shared. If you wish the FTT to be shared, leave this field blank (do not enter a status name). If both shared and not shared FTTs are to be selected, use asterisk "*" notation.

Note:

The status definition is independent of the application definition.

Adding (Defining) a File Translation Table

Before an FTT can be used, it first must be defined. Then the defined FTT must be assigned to the application status; that is, the destination status where it is applied during an application migration.

An FTT can be defined as shared or not shared with other statuses of the same application, or with all applications.

Step 1. Accessing the FTT Allocation Screen

To access the FTT Allocation screen, enter Code A (Add File Translation Table) on the FTT Menu along with the following information and then press ENTER:

- an operand (A or O) to indicate the table type AND or OR.
- optionally, the name of the application to which the FTT is being defined. If you do not specify an application, the FTT can be used by all applications.
- a new, unique name for the FTT.
- optionally, the name of the status to which the FTT is being restricted (not shared). If you do not specify a status, the FTT can be used by all statuses (shared).

Operand OR Allocation Screen

When you specify the OR operand, the origin and destination database numbers (DBnr) are paired, and the origin and destination file numbers (Fnr) are paired.

Each origin DBnr may be uniquely defined and must correspond to another uniquely defined DBnr. Likewise, each origin Fnr may be uniquely defined and must correspond to another uniquely defined Fnr.

If you specify the OR operand, the following File Translation Table Allocation "or" screen appears:

[illegible]

Operand AND Allocation Screen

When you specify the AND operand, the DBnr and Fnr attributes are paired by origin and destination. Only one combination of each DBnr and Fnr may be specified for the origin table. Likewise, only one combination of each DBnr and Fnr may be specified for the destination table.

If you specified the AND operand, the following File Translation Table Allocation "and" screen appears:

[illegible]

Allocation Screen Fields

The attributes for both the OR and the AND FTT Allocation screens are the same.

| Attribute | Description |
|------------------|--|
| DBnr Origin | A list (or range) of all possible databases corresponding to the views referenced by any object as an external subordinate object at compile time. A database number may be any value between 1 and 65,535. Each number may be specified only once. |
| DBnr Destination | A list (or range) of all possible databases that the objects access. Each database identifies the DBnr of the user data. Each database placed in this list must have a corresponding originating database number (DBnr Origin). A database number may be any value between 1 and 65,535. Each number may be specified only once. |
| Fnr Origin | A list (or range) of all possible files corresponding to the views referenced by any object as an external subordinate object during compile time. A file number may be any value between 1 and 65,535. Each number may be specified only once. |
| Fnr Destination | A list (or range) of all possible files that the objects access. Each file number identifies the Fnr of the user data. A file number may be any value between 1 and 65,535. Each number may be specified only once. |
| Page | Allows you to specify the page number (backwards or forwards) to be displayed for the DBnr and/or Fnr table. The page number may be any value between 1 and 22. |
| Version | As long as a version of an FTT has not been used in a migration, it can be modified. Once the FTT version has been used in a migration event, any attempt to modify it causes PAC to create a new version and assign a new version number to it. This version supersedes any previous versions as the current version. Previous versions remain but cannot be modified. The current version is used for any required migration events. |

The following PF key functions are unique to the File Translation Table Allocation screen:

| Function | Is Used to ... |
|----------|---|
| Seq-D | (sequence destination) arrange the list of DBnr and Fnr in ascending sequence by destination DBnr and Fnr. |
| Seq-O | (sequence origin) arrange the list of DBnr and Fnr in ascending sequence by originating database. |
| Save | save the file translation table after all information has been entered. |
| File T | display a list of all views with their corresponding databases and file numbers currently used by the application. Views may be selected directly from this list. |

Step 2. Entering the Originating Database/File Numbers

Enter the originating database numbers and file numbers accessed by the application in the DBnr Origin and Fnr Origin columns, respectively; that is, the DBnrs and Fnrs of the views/DDMs with which the objects were compiled.

For example, if the originating database number is 20 and the originating file numbers are 13, 14, and 15, enter "20" in the DBnr Origin column and "13, 14, and 15" in the Fnr Origin column as shown in the following screen:

[illegible]

Note:

PAC resolves duplicates if the same entries are selected/entered more than once.

If you do not know the originating database/file numbers that the application accesses, you may select views from a list as follows:

1. Press PF11 (FileT) to display a list of views, database numbers, and file numbers.

The View window appears:

```

11:10:45          ***** PREDICT APPLICATION CONTROL *****           2000-07-01
User PACUSR      - File Translation Table Allocation -                 Oper OR

File Table ..... DEMO_FTT_TWO                                     Modified ..
Application ..... ORDERS                                           Version ...1
Destination status ... +-----+-----+
                        DBnr Origin                                - View -
                        -----
                        _____ C View Name                      DBnr Fnr
                        _____ - - - - -
                        _ ARTICLE                               20    13
                        _ CUSTOMER                             20    14
                        _ INVOICE                              20    15
                        _ INVOICE-LINE                         20    15
                        _____
                        _____
                        _____
                        _____
                        _____
                        _____
                        _____
                        _____
                        _____
                        _____
Command ===> +-----+-----+
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12--
Help Menu Exit Date -- ++ - + Seq-D Save FileT Canc

```

2. Select the desired views from this list by marking the view(s) with an X in the "C" column and pressing ENTER.

The database numbers and file numbers of the selected views are then placed in the DBnr Origin and Fnr Origin columns of the File Translation Table Allocation screen.

Step 3. Entering the Destination Database/File Numbers

In the DBnr Dest. and Fnr Dest. columns, enter the destination database numbers and file numbers that the application accesses, respectively.

For example, if the originating database number is 20 and is to be translated to 21, enter "21" in the DBnr Dest. column directly across from the "20" designation in the DBnr Origin column. If the file number is 13 and is to be translated to destination file number 24, enter "24" in the Fnr Dest. column directly across from the "13" designation in the Fnr Origin column as shown in the following screen:

[illegible]

Note:

PAC resolves duplicates if the same entries are selected/entered more than once.

Step 4. (Optional) Changing the Sequence of the Table Entries

You may optionally change the sequence of the table as follows:

- Press PF9 (Seq-D) to arrange the list of DBnr and Fnr in ascending sequence by destination DBnr and Fnr; or
- Press PF9 (Seq-O) to arrange the list of DBnr and Fnr in ascending sequence by originating database.

Step 5. Confirming FTT Entries and Adding the FTT

1. Press PF10 (Save) when all of the information has been entered in the relevant columns. A Save Confirmation window is displayed on which you may either reject or accept the new definition:

[illegible]

2. To confirm the FTT entries and add the FTT, overwrite the default with Y (Yes) in the Save Confirmation window; to return to the previous screen without confirming the entries or adding the FTT, just press ENTER.

When adding an FTT, the following occurs:

- PAC scans the specified application for all known databases and file numbers accessed by the application objects. This is determined accordingly as all views/DDMs registered to the application.
- PAC verifies that the most recent versions of views for the specified application are used, and all databases and file numbers used are placed on the DBnr and Fnr origin lists.

Selecting a File Translation Table

1. To display a list of FTTs, enter Code S (Select FTT) on the FTT Menu along with
 - range notation in the File Table field to limit the list; or enter an asterisk (*) to select all FTTs.
 - the type of list to be displayed:
 - For a list of all FTTs (shared and not shared), enter an asterisk (*) in the Status field.
 - For a list of only shared FTTs, leave the Status field blank.
 - For a list of not shared FTTs for a specific status, enter the status name in the Status field; or enter range notation to limit the list.
 - the desired application(s):
 - For a list of all applications, enter an asterisk (*) in the Application field.
 - For a list of only FTTs applicable to non-restricted or specific applications, leave the Application field blank.

- For a specific application, enter the application name.

2. Press ENTER to display the File Table Selection List:

| 14:58:27 | ***** PREDICT APPLICATION CONTROL ***** | 2000-07-01 |
|--|---|---------------------|
| User PACUSR | - File Table Selection List - | |
| SELECT * with Status *** shared ** for Apl * | | |
| C | Nr File Table Translation | Version Application |
| 1 | ADMIN_FTT | 1 ORDERS |
| 2 | ADMIN_EXTND_FTT | 17 ORDERS |
| 3 | DEMO-TAB-01 | 2 DEMO |
| 4 | DS_DEMO_FTT_01 | 3 DS_DEMO |
| 5 | FTT-0001 | 1 DS_DEMO |
| 6 | FTT_DC_1 | 2 DS_DEMO |
| 7 | FTT_OC_1 | 7 ORDERS |
| 8 | FTT_OC_2 | 1 ORDERS |
| 9 | FTT_OC_3 | 1 ORDERS |
| 10 | FTT_PS_1 | 5 **ALL** |
| 11 | NEW_TABLE_93_04_05 | 4 ORDERS |
| 12 | ORD_EXAM_FTT | 1 ORDERS |
| 13 | ORDERS_FTT_01 | 1 ORDERS |
| 14 | ORDERS_FTT_02 | 1 ORDERS |
| Mark Selection, Enter Number or 'T' (Top) __ | | |
| Command ==> | | |
| Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12-- | | |
| Help Menu Exit -- ++ > Canc | | |

The above File Table Selection List example screen displays an alphabetical list of shared FTTs along with the maximum number of versions that exist for a particular FTT and the application to which each FTT belongs.

The sub-function ("SELECT" in the above example) displayed on the line directly under the User field indicates that you used one of the following methods to access this screen:

- Range notation or blank in the Status field along with the Display, Modify, Purge, or Select sub-function;
- The SELECT direct command (see the PAC Reference documentation).

If you accessed the screen with the S (Select FTT) sub-function or with the SELECT direct command for one or more of the listed FTTs, you can process the following sub-function by entering the corresponding Code in the "C" column: D (Display), M (Modify), P (Purge), S (Select). Enter a period ('.') to return to the FTT Menu.

If you mark the FTT with the cursor or if you enter an X or an S in the "C" column; or if you enter the FTT number (From the "Nr" column) in the Mark Selection... field, and press ENTER, you are returned to the FTT Menu where the specified FTT is displayed in the File Table field.

Displaying FTT Creation Dates and Status

- Press PF11 (>) to display the creation dates of the FTTs listed on the File Table Selection List screen.
- Press PF11 (>) again to display the status (shared, not shared) of the FTT.
- Press PF10 (<) to return to the previous screen.

Displaying a File Translation Table

- To display an FTT, enter Code D on the FTT Menu, the name of the FTT, and optionally the name of the application to which the FTT is assigned.
 - If only one version of the FTT exists, the File Translation Table Allocation screen is displayed.
 - If more than one version of the FTT exists, a list of the versions is displayed on the File Table Selection List:

| 15:01:17 | ***** PREDICT APPLICATION CONTROL ***** | 2000-07-01 |
|---|---|---------------------|
| User PACUSR | - File Table Selection List - | |
| SELECT FTT * with Status *** shared ** for Apl * | | |
| C | Nr File Table Translation | Version Application |
| 1 | ADMIN_EXTND_FTT | 16 ORDERS |
| 2 | ADMIN_EXTND_FTT | 15 ORDERS |
| 3 | ADMIN_EXTND_FTT | 14 ORDERS |
| 4 | ADMIN_EXTND_FTT | 13 ORDERS |
| 5 | ADMIN_EXTND_FTT | 12 ORDERS |
| 6 | ADMIN_EXTND_FTT | 11 ORDERS |
| 7 | ADMIN_EXTND_FTT | 10 ORDERS |
| 8 | ADMIN_EXTND_FTT | 9 ORDERS |
| 9 | ADMIN_EXTND_FTT | 8 ORDERS |
| 10 | ADMIN_EXTND_FTT | 7 ORDERS |
| 11 | ADMIN_EXTND_FTT | 6 ORDERS |
| 12 | ADMIN_EXTND_FTT | 5 ORDERS |
| 13 | ADMIN_EXTND_FTT | 4 ORDERS |
| 14 | ADMIN_EXTND_FTT | 3 ORDERS |
| Mark Selection, Enter Number or 'T' (Top) ____ | | |
| Command ==> _____ | | |
| Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12--- | | |
| Help Menu Exit -- ++ > Canc | | |

The columns display the FTTs in alphabetical order, the version of each FTT, and the applications to which each FTT is assigned. Versions that have been used in a migration are highlighted.

- To display a specific version of an FTT on the File Translation Table Allocation screen, mark the desired FTT with the cursor in the "C" column or enter the number (from the "Nr" column) in the Mark Selection... field:

| | | |
|---|---|----------------------|
| 08:56:09 | ***** PREDICT APPLICATION CONTROL ***** | 2000-07-01 |
| User PACUSR | - File Translation Table Allocation - | |
| File Table | ADMIN_EXTND_FTT | Modified ..00-01-02 |
| Application | ORDERS | Version ...12 |
| Destination status ... | ** Shared ** | |
| DBnr Origin | DBnr Dest. | Fnr Origin Fnr Dest. |
| ----- | ----- | ----- |
| 1 | 2 | 11 1 |
| 2 | 3 | 12 2 |
| 3 | 4 | 13 3 |
| 4 | 5 | 14 4 |
| 5 | 6 | 15 5 |
| 6 | 7 | 16 6 |
| 7 | 8 | 17 7 |
| 8 | 9 | 18 8 |
| 9 | 10 | 19 9 |
| 10 | 11 | 20 10 |
| 11 | 12 | |
| 12 | 13 | |
| | Page .. 1 | Page .. 1 |
| Command ==> | | |
| Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12--- | | |
| Help Menu Exit Date -- ++ - + Seq-D Usage Canc | | |

This screen is similar to the screen used to define the FTT. You may page forward or backward using the appropriate PF keys, or by entering the number of the page in the Page: field for the DBnr and/or Fnr.

3. To display a list of statuses that use the FTT, press PF10 (Usage).

- If the FTT is not shared, only one Status Name entry is displayed.
- If the FTT is shared with several statuses, the Translation Table Usage window displays a list of the names and types of all other statuses that use the FTT:

| | | |
|---|---|------------------|
| 12:20:58 | ***** PREDICT APPLICATION CONTROL ***** | 2000-07-01 |
| User PACUSR | - File Translation Table Allocation - | |
| File Table | DS-DEMO-FTT | |
| Application | DS_DEMO | |
| Destination status ... | ** Shared * | |
| DBnr Origin | DBnr Dest. | Status Name Type |
| ----- | ----- | ----- |
| 10 | 235 | PRODUCTION P |
| | | DEVELOPMENT D |
| Pa Enter '.' to Exit ... _ | | |
| Command ==> | | |
| Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12--- | | |
| Help Menu Exit Date -- ++ - + Seq-D Usage Canc | | |

If no statuses use the FTT version, a window appears displaying the following message:

"Translation Table is not used by any Statuses."

Modifying a File Translation Table

If the FTT has not been used in a migration, the existing information for the FTT may be modified.

If the FTT has been used in a migration, PAC assigns a new version number to the FTT when you attempt to modify it. This version supersedes any previous versions as the current version. The previous versions remain, and are not modifiable.

For example, if the current version (Version 3, for example) has been used in a migration event and you attempt to modify it, PAC creates a new version (Version 4) of the FTT and a "4" is displayed in the Version field on the FTT Allocation screen. Version 4 may be modified as often as necessary until it is used in a migration event. Version 3 remains as an audit trail for any migration event that used it. The DBnr and Fnr data from the previous version are provided as the base information for the new version.

Once the FTT is created, migration events that use it will use the current version until it is superseded when the FTT is modified.

To modify a file translation table

1. On the FTT Menu, enter Code M (Modify FTT), the name of the FTT to be modified, and optionally, the name of the application to which the FTT is assigned and/or the name of the status to which the FTT is assigned.

The FTT Allocation screen appears .

2. Modify the FTT.

You may use the PF keys or specify a page number in the Page: field to page forward or backwards in the list to modify DBnr and/or Fnr assignments. Refer to the section Allocation Screen Fields for more information.

3. Press PF10 (Save) or press ENTER to confirm your modifications and return to the FTT Menu.

Copying a File Translation Table

When copying an FTT, you may change the application and/or status on the FTT Menu so that the new FTT acquires that new application and/or status assignment.

To copy a file translation table

1. On the FTT Menu, enter Code C, the name of the FTT to be copied, and a name for the new FTT. If the new FTT is to be restricted (not shared), enter the status and/or application name as well.

The Copy File Translation Table screen appears. The information assigned to the new FTT is identical to that of the old FTT unless you entered a status and/or application name on the FTT Menu.

2. Modify the information (adding and removing entries as required) and press PF10 (Save) to update.
3. To retrieve the list of views used by the specified application, press PF11 .
4. Press PF3 to exit.

Linking an FTT to an Application Status Link

Once an FTT has been created (defined), it must be assigned as an attribute of the To status (destination status) of an application status link before it can be used in a migration event. This is accomplished by modifying the specific application status link.

Even if an FTT is assigned a specific application and status, the FTT must still be defined to the application status link because there may be more than one FTT with the same application and status assignments.

When the migration event is created for the application, the FTT is then assigned automatically and may not be overridden.

Refer to the section Adding an Individual Application Status Link for detailed information.

Changing an FTT Assignment

To change the FTT assigned to a particular application status link, type over the FTT name displayed in the Translation Table field on the Modify Application Status Link screen.

If the FTT is specified as shared ("Y") in the Shared Table field, the entry is updated.

If the FTT is specified as not shared ("N") in the Shared Table field, it cannot be updated to be shared. You can only update an FTT to shared as a separate task when the FTT is defined. Updating results in the creation of a new version of the FTT.

If the FTT is dormant, PAC assumes that an error previously occurred and, if no other application status links use this table, the FTT entry is purged.

Purging a File Translation Table

1. To purge an FTT, enter Code P and the name of the FTT on the FTT Menu.

If there is more than one version of the FTT, a list of all versions is displayed on the File Table Selection List:

```

09:01:35          ***** PREDICT APPLICATION CONTROL *****          2000-07-01
User PACUSR      - File Table Selection List -
SELECT FTT * with Status *** shared ** for Apl ORDERS
C Nr File Table Translation          Version Application
- - - - -
_  1 FTT_OC_1                      7      ORDERS
_  2 FTT_OC_1                      6      ORDERS
_  3 FTT_OC_1                      5      ORDERS
_  4 FTT_OC_1                      4      ORDERS
_  5 FTT_OC_1                      3      ORDERS
_  6 FTT_OC_1                      2      ORDERS
_  7 FTT_OC_1                      1      ORDERS

                                Mark Selection, Enter Number or 'T' (Top) __
Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Help  Menu  Exit      --      ++                      <      >      Canc

```

FTTs that may not be purged are highlighted.

2. To select the appropriate version, enter P in the "C" column.

PAC determines whether the FTT has been used by a migration event. If so, the purge request is rejected and the Purge Rejection window is displayed with the following message:

"This version of the File Translation Table may not be purged because it was used by an event."

If the FTT has not previously been used, the Purge Confirmation window appears.

3. To purge the FTT, type Confirm or press PF5.

To return to the FTT Menu without purging the FTT, type a period (.) or press PF3.